RADIO

VACUUM TUBE WHEN USED AS AMPLIFIER

It Will Function Thus for Either Radio Frequency or Audio Frequency.

Starting today we shall give a detailed description of the vacuum tube when used as an amplifier. This series, as in the past, is continuous and if clipped out and saved will be convenient for reference.

When the three-electrode vacuum tube was used as a detector, the circuits associated with it were such that where a symmetrical alternating difference was applied to the grid, a symmetrical change in plate current resulted. That is to say, the vacuum tube acted as a rectifier. In addition to rectifying, the tube also amplified. The variation in plate circuit was "K," where "K" is the amplification constant of the tube, times what it would have been in a two-electrode tube, for the same potential impressed on the grid.

By properly adjusting the electrical constants of the circuits associated with a three-electrode tube, symmetrical variations of grid potential can be made to produce symmetrical variation in plate current, which are "K" times the amplitude of the plate circuit variations of a similar two-electrode value with the same applied grid potential. This means that if a three-electrode value be used in the proper circuits in a radio receiver, the signals can be made to appear as though the received signal is "K" times as strong as it actually is. If two tubes are used with their proper circuits in conjunction with a radio receiver the received signals will appear to be "K" times as strong as they actually are and so the apparent strength of the incoming signal is multiplied by "K" for each additional tube added to the receiver circuit.

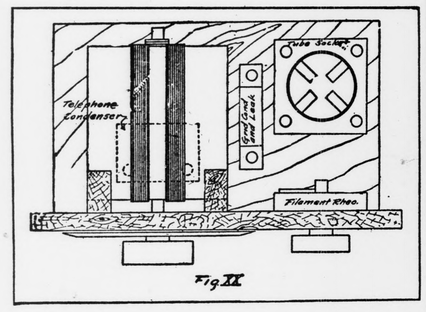


Fig. XII

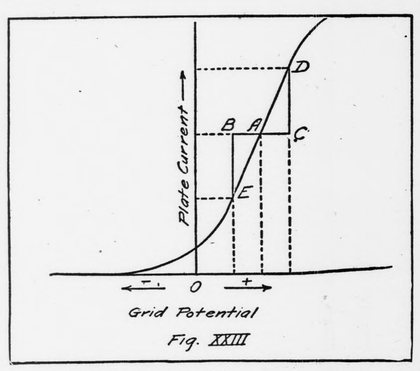


Fig. XXIII

A vacuum tube used in conjunction with a circuit that will cause the plate current to vary in exact proportion to the applied grid voltage, but apparently caused by "K" times the actual grid voltage variation, is called an amplifier. If the tube functioning as an amplifier is used to amplify the incoming signal at radio frequency before it is rectified by the detector, it is termed a radio frequency amplifier. If the tube functioning as an amplifier is used after the incoming radio frequency has been rectified by the detector, it is termed an audio frequency amplifier.

Returning again to the characteristic curve of the three-electrode vacuum tube, shown in Figure 23, notice its shape. Suppose that a positive potential was applied to the grid by means of a "C" battery so that the tube would function at a point represented by "A" on the characteristic curve. If now the applied grid potential from the "C" battery be reduced by an amount represented by A-B in Figure 23 the corresponding reduction in plate current will be represented by B-E. On the other hand if the grid potential be increased by an amount represented by A-C, where A-C equals B-C, the corresponding increase in plate current is C-D.

If the portion of the characteristic curve in the region of E-A-D is a straight line, then C-D will equal B-E, or so long as the working range falls within straight line portion of the characteristic curve, symmetrical changes in grid potential will cause symmetrical changes in plate current. From this it can be seen that if the working point "A" be selected near the bend of the characteristic curve, symmetrical changes in grid potential will not cause symmetrical changes in plate current. Since the plate current variation in such case would bear only slight relation to the grid variation in potential, the output of the tube would be distorted.

In applying amplifiers to receiving sets used to pick radiophone stations, distortion is one of the greatest difficulties to overcome. Too strong signals will result in decreased amplification. In Figure 23, if the applied variation in grid potential were 10 times that shown in the example, the plate current would not change 10 times as much, because of the bends in the curve, due to saturation. Finally, a condition can be reached where the use of an amplifier tube will decrease the signal strength because of the saturation of the tube.

The rectified incoming signals would be louder without the use of the amplifier tube, because of the inability of the plate current of the tube caused by saturation to increase in proportion to the signal strength.

There are, in general, two factors that can be taken from the characteristic curve and the second is the length of the straight portion of the curve. The slope of the straight portion of the curve determines the amplification of the tube. The more nearly vertical the straight portion of the curve is, the greater will be the change in plate current for a given change in grid potential, or in other words, the louder will be the response in the telephone receivers corresponding to a given received signal. The length of the straight portion of the curve determines the maximum variation in grid potential that will cause the tube to function properly without distortion.

TIPS TO RADIOISTS

At Muncie, Ind., bacon was fried by means of a radio current. At last an explanation for that "frying" noise.

Gifford Pinchot, nominated for governor of Pennsylvania by the vote of the people, acknowledges his great indebtedness to the radio. A primary coil no doubt played an important part.

An inventor of Chicago claims to have invented radio apparatus that permits of successful communication with the spirits. We hope that the anti-prohibitionists will not misinterpret this claim.

The police department of Portland, Ore., has asked for an appropriation for radio receiving and broadcasting stations and to equip the police automobiles with radio apparatus. Copper wire, it is needless to say, will be used.

Lord Northcliffe, famous English editor, in speaking of the future of journalism, recently predicted that radio would have an effect upon the publication of newspapers that will equal the invention of the linotype and high-speed press. He said that radio would undoubtedly come into general use of newspapers and newsgathering agencies.

FINDS NEW TUNING DEVICE

Research Committee of the Newark Club Perfects "Link System of Coupling."

The research committee of the Newark Wireless club has perfected a "link system of coupling," which is said to have been found to be superior to any other tuning device whether used with a crystal or a tube.

The set described has a primary coil of sixty turns wound on a cardboard tube three inches in diameter, lapped every ten turns. The secondary coil is mounted at right angles to the primary and has 75 turns on a three-inch tube, lapped every ten turns. Twelve turns are then wound around the primary and the wire carried over to the secondary, thus linking the primary to the secondary. All wire is No. 24 single cotton.

Is Your Antenna High Enough?

A frequent mistake that is made in the erection of the antenna of a receiving station is in thinking that the only prerequisite is to get the wire or wires as high as possible, regardless of any other conditions. In fact, there is a tendency on the part of people living in tall apartment houses to feel that if they place their antenna on the roof, regardless of how close it comes to other objects, it will function properly. The fallacy in this reasoning will be evident when it is realized that the electrical pressures on the antenna (one of the factors in determining the loudness of the signal) depends on how far the antenna is above grounded objects. The frame of apartment houses is generally of steel. This steel framework rests on the ground. Current is, therefore, free to flow up the steel frame and thus bring the ground pressure nearer to the antenna.

Department Store Broadcasting.

There are now, in the United States, 71 licensed broadcasting stations, of which seven are department stores. Of the seven, Philadelphia is the location of three; New York of one; Newark N. J., of one; St. Louis of one and Los Angeles of one.

NICOTINE KILLS STRIPED BEETLE

When Applied in a Mixture It Has Been Found Effective in Protecting Plants.

POISON ACTS AS REPELLENT

Insect Makes Its Appearance Suddenly and in Large Numbers and Serious Injury May Result If Application Is Neglected.

(Prepared by the United States Department of Agriculture.)

Nicotine sulphate, when applied in a mixture with a dust, has been found by the bureau of entomology of the United States Department of Agriculture to protect young cucumbers, melons and related crops successfully from the ravages of the striped cucumber beetle. Department Circular 224, "Nicotine Dust for Control of the Striped Cucumber Beetle," by W. H. White, scientific assistant in truck-crop insect investigations, recently issued, gives the results of various experiments at Arlington farm and directions for preparing and applying the dust.

Amount to Apply.

A dust mixture containing 4 per cent nicotine proved as effective as those containing greater amounts, and

Cucumbers of Uniform Size Result If Vines Are Given Proper Attention.

is therefore recommended. One-fourth to one-half an ounce to the hill is effective for one application. The dust acts as a repellent and also kills the beetles when they come into contact with it. When applied properly it drives the insects from the cracks in the soil

Type of Effective Duster.

A duster that will throw a good volume of dust quickly and forcibly to prevent the beetle from escaping by flight should be used. A cheese-cloth sack or knapsack-bellows type of duster is effective on small areas. The dust must be applied as soon as the plants appear above the ground, so that they are well covered. The insect makes its appearance suddenly and in large numbers and serious damage may result if this application is neglected.

Department Circular 224 may be obtained free upon application to the United States Department of Agriculture, Washington, D. C.

MARRIED MEN BEST WORKERS

Chances for Securing Employment on Farm Are Less Than 50 Per Cent for Single Men.

If you want a job on a farm your chances of getting it are slightly better than 50 per cent if you are married, and slightly less than 50 per cent if single. But if you're married and have children your chances are around 45 per cent.

The United States Department of Agriculture has found that, of 1,201 farm jobs advertised in eastern farm papers from 1920 to 1922, single men were wanted in 387 instances, and married men in 416 instances. In 398 cases the social requirements were not stated.

Of the advertisements for married men children specifically were not wanted in 54 instances. Children were wanted or were permissible in 14 instances.

Many farmers who hire laborers have no dwellings to let and consequently cannot employ married men, it is said. If the farmer has a dwelling for a laborer's family he prefers that it should be occupied.

SILO FOR STORING COW FEED

One Should Be Constructed Where Farmer Has as Many as Six or Seven Dairy Animals.

Build a silo for storing feed if you have as many as six or seven cows. A home-made stave silo 10 by 24 feet will cost less than was paid last winter for five tons of hay. Four acres of corn will fill it and do the work of ten acres of hay.

GENTLE TREATMENT IS BEST

It Pays to Keep Milking Periods as Regular as Possible and Milk in Same Order.

It pays to treat the cows gently and firmly, to keep the milking periods as nearly regular as possible, to milk in the same order, and for each milker to milk the same cows each time. This is necessary to the highest development of a herd no matter if the influence in individual cases seems insignificant.

Benefits of Cultivation.

Cultivating corn and other crops kills weeds, conserves moisture, aerates the soil, and puts the ground in good condition to catch and hold further rains.

Forage Crops Needed.

Forage crops are absolutely necessary for economical pork production. If our forage crops are taken away, we have no chance to compete with the corn belt men.

Range Helps Health.

Wherever there is land enough for the fowls to enjoy a good range, they will keep healthy and thrifty and pay extra good profits.

Increase Number of Fowls.

On many farms the number of fowls kept could be considerably increased without much extra expense.

Desirable Self-Feeders.

Self-feeders are a desirable piece of equipment for the poultry house for feeding dry feeds.

WAR GASES PROPOSED TO ERADICATE PESTS

Some of Them Promise to Be Quite Efficient.

Particularly Useful When Heavier Than Air and Used on Burrowing Rodents and Insects in Stored Products.

(Prepared by the United States Department of Agriculture.)

Deadly gases that were developed for war purposes are now being tried out by the United States Department of Agriculture as a means for destroying noxious birds, animals, and insects. Some of them promise to be useful when applied under proper conditions, particularly those that are heavier than air and can be used on burrowing rodents, and possibly subterranean insects and pests in stored products.

The most recent proposal is to use gas to kill destructive birds that congregate in marshes. In the coming fall the biological survey, in co-operation with the chemical warfare service, is planning to make a trial of the method on blackbirds in the Imperial valley of California. In that region these birds are said to do at least $50,000 worth of damage to the milo crop each year. Because of their feeding habits it is impossible to destroy these birds with poisoned baits, but, as they roost on the reeds in the marshes, it is thought that they can be killed by a gas cloud at night when the wind is favorable. The blackbirds are migratory and return to the same places year after year. It is thought that a big killing in a certain locality will probably free it of the pests for many years.

Arrangements also are being made by the biological survey with the chemical warfare service for investigating the possibility of using poison gases on such burrowing rodents as rats, prairie dogs, ground squirrels, and wood chucks.

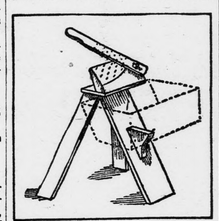
Entomologists of the department have already worked in co-operation with the War department in testing various gases on insect pests of growing plants and those that infest stored grain, but it has not yet been found advisable to recommend anything to take the place of hydrocyanic-acid gas or carbon bisulphide.

The serious disadvantages of many of these new gases is that they are dangerous or very irritating to men, horses, and mules, and require the use of masks and great care in handling.

CORN SHELLER EASILY MADE

Both Lever and Cut-Away Portions of Block Are Studded With Protruding Spikes.

A homemade corn sheller is just the thing where only a little corn is to be shelled. A block of wood with a sloping notch cut from one end is mounted on three legs. A lever is at-


Homemade Corn Sheller.

tached to the block. Both lever and cut-away portions of the block are studded with spikes driven so that the heads protrude about half an inch. The box that catches the corn is fastened to the legs of the sheller.

KEEP HOE GOING IN GARDEN

Success of Vegetable Crops Depends Greatly on Cultivation—Plan to Keep Weeds Out.

Much of the success of vegetable culture depends on keeping the hoe going. Never miss a chance when the ground is in a semimoist condition. That is just the very best time for the work. Keep stirring as deeply as possible between the rows of all young growing vegetables to open up the soil and lay it ready for the action of sun and air. By this process weeds never get a foothold, far less reach the seeding stage. If this plan is persisted in one can almost see the vegetables growing. It is not hard work, and it is well worth the time it takes.

SUMMER WEATHER AND FLIES

Many Calves Can Be Saved If Given Careful Attention and Kept in Shaded Pens.

Hot weather and flies ruin a great many calves. It is advisable to protect the young animals very carefully during the fly season. Spring calves are never allowed by some breeders to pasture the first summer, but are kept in shaded pens away from the heat and flies. Fall calves, likewise, are not allowed pasture during the hot days, but are turned out at night into small paddocks or exercise pens. Unless the calf is getting plenty of grain, washy grass may do it more harm than good.

Sheep Should Be Profitable.

Sheep require less care than hogs and much less range than beef cattle, and in a thickly populated state of small farms they should prove a profitable source of revenue.

Satisfactory Hog Oil.

Old cylinder oil seems ordinarily to make a very satisfactory hog oil. At any rate, a number of good hog men use old cylinder oil and claim that they get good results.

Flea Attacks Fowls.

A species of flea known as the bird flea attacks species of birds, including fowls and pigeons. It is provided with piercing mouth parts with which it penetrates the skin and extracts the blood.

Prevent Lice and Mites.

It is possible and practicable to keep a flock of poultry absolutely free from lice and mites and this should be the aim of every one who is endeavoring to establish a successful poultry industry.

Silk and Linen Street Clothes

The summer street dress has come to be a work of art all in a class by itself. Today, as you walk along the street, notes a fashion writer in the New York Times, you are not impressed by the general dowdiness of female human nature, but you are quite overcome by the general smartness which the crowd as a whole represents. Not only are there a few high lights in the way of smart suits and dresses, but the common tenor of the crowd holds you spellbound with the air of fashionable attire that predominates.

Long, Loose Coat of Heavy White Crepe Embroidered in Black and Lined With Red.

It may be that all of the dresses that women are wearing have suddenly taken a leap as regards their character and tone. But certain it is that the street clothes have established a brand-new standard. Time was when women on the street or at functions where street clothes were demanded all looked more or less alike. There was a fixed standard from which it was not possible to deviate to any large extent. Now all that is changed in the most miraculous and interesting way. Every woman you meet is different from the last. Each one has something, it seems, that is original about the gown or suit she has chosen to wear. Each one seems bent upon exhibiting her own individuality to the full extent of her personal powers. And for these reasons, there has come about this subtle change in the appearance of the dressing of the crowd.

Then, among all of the existing good dressing, there stand out above all the rest certain spots that are even more beautiful than the rest and others which have about them that air which says "We shall lead the fashions of a coming season." It is interesting to notice them as you go about. Those with distinction above the ordinary find no difficulty in asserting their own. They are not by any means ornate nor overtrimmed with extra additions. They are, on the contrary, conspicuous for their extreme simplicity and the brilliance of perfection with which their designers have carried out the idea of the elimination of detail.

The silk coat is a development of this season which serves, more than any other one achievement, to make the general tone of the dressing of the women reach a much higher level. It is not so heavy that it can be called hot, but, on the other hand, it has that air of formality which so notably fits it for wear upon the street.

White Coat of Crepey Silk.

One of the newest of these coats happens to be made of white. Its material is one of those heavy, crepey silks which have about them so much body and so much character that they are fit to be classed in this connection with woolens of any variety, weight or weave from which these coats are made.

Then, because the weight of silk is so inconsequential a thing, it can afford to have a lining, and just here is where the chief beauty of the whole situation enters. For the linings, this season, are carrying about with them in their secluded roles a great deal of the style and distinction which is the portion of these modern coats. And again, just as in the case with the white silk coat, these newer wraps offer a fine opportunity for placing of the big, beautiful bands of hand-worked embroidery that play so conspicuous a part in giving the style and droop and hang to the coat once its lines have been perfected as a basic idea. The white coat, for instance, is supplied with a wide band of black embroidery along the bottom of the front panel, and that idea is repeated on the sleeves. Then the lining for this wrap is done in cherry-red crepe de chine of the very softest quality, so that glimpses of that hot and glorious color against the outer surface of black and its contrasting white make just the prettiest sort of a picture. And the dress worn under a wrap of this sort sinks into obscurity because of the beauty of the outer covering. It can be either a plain black dress or one of white that is designed quite without trimming, for the coat supplies all of the dash of decoration and color that could possibly be desired.

Coats Match Dresses.

The costume suit, which was so loudly heralded in the fall has carried over into summer with all of its finest points to the fore, and it bids fair to be one of those things which, in the fall, we will cling to as an inspiration not to be foresworn.

One of the very latest ones is the long-waisted, short-peplumed coat. There is every attraction here of feminine grace and charm, and at the same time the suit, either with its coat or without it, has every attribute of dignity to carry along with it. The dress portion of this costume suit is made from a combination of that soft, cream-colored French cotton crepe, and the skirt is made from a lemon-yellow ratine. Now those two materials are, to be sure, only the foundations. Upon them are superimposed many bands and lines of embroidery done in stitches of mercerized cotton in colors of black, brown, sparkling red and white. On the blouse these hand-worked bands contain all of the colors, but when it comes to the skirt only the black and the white threads are used, and the same is true of the belt made of a shaped piece of the ratine. Then the coat is made of the same fabric that goes to make the skirt of the frock worn underneath it. And the little jacket is further embellished by bands of a dyed kolinsky fur carrying the softest of the darker tones of brown. The coat is lined then with a soft, cream-colored silk having a smooth surface which turns back on the collar and cuffs and shows becomingly against the neck and against the puffed sleeves of the cotton crepe which jut out underneath the wide cuffed sleeves. One nice thing about the skirt to this frock is the way it pleats in on the sides. This gives a sufficient amount of room for walking, and at the same time it keeps that trig, straight look.

Golden Brown Crepe.

Another dress designed for street wear and worn, indeed, by the very smart woman in New York was made of a golden brown crepe. The skirt had a straight panel at front and at back, while at the sides were these inserted sections of narrow side pleatings. At the base of the skirt the little pleats were tacked together so that the skirt puffed out above that point in a sort of harem fashion. Worn with this skirt there was a cape jacket with loose and flowing sleeves through which other puffed sleeves of a Russian blouse bodice were seen to protrude. This little bodice of white had lines of Russian embroidery in tones of yellow and brown marching around the collar and down the front, while the ends of the sleeves had

Long-Waisted Jacket Made to Wear With Dress of White Cotton Crepe and Ratine.

frills over the bands peeping out from another band of the brightly colored Rusian stitches.

It is wonderful to see how many women, and well dressed and good looking women, too, have adopted the Russian blouse for serious wear upon the street. And these blouses, when they are at their most attractive stages, are not made as adaptations of the original ones, but they are indeed those original models in their pristine state.

The draped dresses that are worn upon the street and at luncheons in the smart restaurants or shopping during the days that are not so hot, are perhaps the most graceful of all.

FUR WRAPS COMBINED WITH LACE

Ermine Favored by Paris Women for Summer Wear; Odd Short Cape Has Armholes.

The Parisian favors ermine as a summer fur in short capes and coats, although she also wears a scarf of silver or white fox, says Harper's Bazar.

"When Madame murmurs softly over her shoulder 'My wrap, please,' she refers to the wide sleeved little ermine that falls with equal grace over the bodice of her slim back crepe frock or her gaily-colored one of more perishable tissue.

"An odd short cape of ermine has armholes through which the sleeved arms are thrust, the cape extending thus to adjust in front of the shoulders. A great collar of ermine is wrapped about the throat or falls over the shoulders.

"Straight wide scarves of ermine, wrapped shawl fashion about the shoulders, are smart and possess the advantage of never twice presenting the same silhouette. One short ermine wrap is scalloped in the prevailing fashion. Another is trimmed with black monkey. Fur is combined with lace in wraps, frocks and hats."

Fringed Capes.

Spanish influence is evident in all the clothes of the season, and especially in the great shawl capes so tremendously popular during the early spring months. Black was the favorite, and a wrap of this type is serviceable where one does not find it too cool for summer evenings. It is usually trimmed with deep silk fringe at the bottom. Many of these Spanish capes are lined either with black, white or gray, and sometimes the fringe at the bottom is a combination of black and white.

Gingham and Crepe.

Gingham and crepe de chine join their forces to make some of the new midsummer frocks.

IMPROVED UNIFORM INTERNATIONAL

Sunday School Lesson

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Moody Bible Institute of Chicago.)
Copyright, 1922, Western Newspaper Union.

LESSON FOR AUGUST 13

ESTHER SAVES HER PEOPLE

LESSON TEXT—Esther 3:1-9:32.

GOLDEN TEXT—The righteous cry, and the Lord heareth, and delivereth them out of all their trouble.—Psalm 34:17.

REFERENCE MATERIAL—Matt. 20:20-28; Rom. 5:6-10; 12:1, 2.

PRIMARY TOPIC—A Brave Young Queen.

JUNIOR TOPIC—Esther, the Brave Queen.

INTERMEDIATE AND SENIOR TOPIC—A Heroine Worthy of Imitation.

YOUNG PEOPLE AND ADULT TOPIC—Rendering Sacrificial Service.

I. Haman's Wicked Plot Against the Jews (3:1-4:3).

1. The occasion of (ch. 3). Mordecai refused to bow down to Haman whom the king had elevated to the place of prime minister and commanded that reverence should be shown him by all the princes and servants. In order to get rid of Mordecai Haman formulated a scheme and secured the king's endorsement to destroy all the Jews.

2. Fasting and mourning among the Jews (4:1-3). In their distress they sought the Lord. They did that which all those who believe in God had a right to do (Jas. 5:13).

II. Haman Checkmated (4:4-7:10).

1. Plot made known to Esther (vv. 4-8). Mordecai appeared before the king's gate clothed in sackcloth. This condition was reported to Esther by her maids and chamberlains. Upon his refusal to put away mourning Esther sent Hatach, her special attendant, to find out the cause of it. Mordecai told him of Haman's plot and the sum of money guaranteed to the king's treasury and accompanied his report with a copy of the decree.

2. Message to Esther (v. 8). This was in the form of a charge that she go unto the king and make request for her people.

3. Esther's hesitancy (vv. 9-12). This was on the ground of a certain law which made it a capital offense for anyone to come into the king's presence unbidden unless the king should extend clemency by holding out the golden scepter. The fact that Esther had not been called to come in for thirty days would seem that the queen was in disfavor.

4. Mordecai presses her obligation (vv. 14, 15). (1) Her own life was involved (v. 13). She might meet death if she went to the king unbidden, but most certainly she would meet death if she made no effort to avert the danger. Being in the king's house would not save her, for the decree had been made against the race of which she was a part. Her silence on this occasion would mean death. (2) She was not God's last resort (v. 14). He argues that deliverance would come from another source. God's work goes on and His purposes are fulfilled regardless of the decisions of men. (3) Reminds her that she had probably been raised up for this very work (v. 14). Every one has been born and prepared for some definite work. God's providence brings us into the particular circumstances where we can most definitely do His will.

5. Esther meets the call of duty (4:15-5:3). (1) Preparation by fasting (v. 16). She instructed Mordecai to gather together all the Jews in Shushan and fast for her for three days and nights. She with her maids did the same. (2) Went into the presence of the king (5:1-3). Having made the decision to do her duty regardless of consequences, after due preparation by fasting and prayer, she presented herself in royal apparel in the presence of the king. She decided that the best thing she could do was to lay her life on the altar. "If I perish, I perish" ought to be our watchword when face to face with duty. (3) King's promise to Esther (v. 3). He assured her that her desire would be granted even to the half of his kingdom.

6. Haman hanged (5:4-7:10). Esther was shrewd as well as courageous. She invited the king and his prime minister to a banquet. At this banquet she proposed another for the following day, at which time she promised to make known to the king her request. Haman went home jubilant, but that night something occurred which turned the tide. The king discovered that no reward had been granted Mordecai for having saved his life. Haman is compelled to exalt Mordecai, and at the second feast the queen revealed his wicked treachery and he is ordered hanged on the gallows which he had prepared for Mordecai.

III. The Jews Delivered (chs. 8, 9).

Haman was dead, but the decree against the Jews still stood. Esther plead that it be reversed. While it could not be reversed, through her influence another decree was sent out which in a large measure counteracted the first. The Jews everywhere were granted the privilege to defend themselves and destroy their enemies.

Get Thee Behind Me, Satan.

And the devil, taking him up into an high mountain, shewed unto him all the kingdoms of the world in a moment of time. And the devil said unto him, all this power I give thee, and the glory of them. If thou therefore wilt worship me, all shall be thine. And Jesus answered and said unto him, Get thee behind me, Satan: for it is written, Thou shalt worship the Lord thy God, and him only shalt thou serve.—Luke 4:5-8.

The Twelve Apostles Named.

And he ordained twelve that they should be with him, and that he might send them forth to preach; and Simon he surnamed Peter; and James the son of Zebedee, and John the brother of James; and Andrew and Philip, and Bartholomew, and Matthew and Thomas, and James the son of Alphaeus and Thaddaeus, and Simon the Canaanite, and Judas Iscariot, which also betrayed him.—Mark 3:14 to 19.

The Parting of the Ways.

And if it seem evil unto you to serve the Lord, choose you this day whom ye will serve; but as for me and my house, we will serve the Lord.—Joshua 24:15.

For Cowards to Lie.

Lie not, neither to thyself, nor man, nor God. It is not for cowards to lie —Herbert.

Business.

The playthings of our elders are called business.—St. Augustine.

PROFESSIONAL CARDS

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If you prefer, send the order by mail or bring it to the office in person.
Let Us Show You What We Can Do

A Merchant
We know says that it's his job to please his customers. He is 100 per cent right. It's our job to please merchants by providing the kind of printing that is wanted. Try us and see what we can do.
We Make Good

You Say You Can't Advertise?
That's what others have said and all of a sudden found some competitor was *doing* what they thought they couldn't do. And getting away with it.
Get the bulge on your competitors by telling your story in an attractive manner so it will be read. You'll get the results.
We Are Anxious to Help

Good Printing
THE kind of printing that pays dividends is the kind you should have. Pale, muddy, poorly arranged printed matter is worse than none. The quality of your business is often judged by the quality of your stationery—inferior printing gives an impression of cheapness that is hard to overcome, while good printing carries with it a desirable suggestion of quality.
We produce only *Quality Printing*. Whether you want an inexpensive handbill or a letterhead in colors, if you order it from us you will be sure of getting good work. We have the equipment and the "know how" that enables us to get out really good printing—printing that impresses people with the good taste of its users. That is the only kind of printing that
Pays

JOB WORK A SPECIALTY

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HIDES PUT ON THE FREE LIST

Democrats and Republicans Side By Side During Debate

BLOC LINES ARE SMASHED

Duty Off Boots And Shoes—Massachusetts Senators Join In Declaring Industry Does Not Need Protection.

Washington. — Hides, boots and shoes and leather were voted back to the tariff free list by the Senate, which thus concurred in action taken by the House more than a year ago. There was only one roll call—on hides—and the result was 39 to 26 against the committee rates of two cents a pound on green or pickled and four cents on dried hides.

Nineteen Republicans voted for a duty on hides and 23 against the duty, while seven Democrats voted for the duty and 16 against.

Most of the more marked lines which have developed in the Senate during the tariff fight disappeared on this vote, but about the only surprise was that majority of the Republicans voted against making hides dutiable.

There was a split even in the Finance Committee majority and in the Republican-agricultural-tariff bloc, which, through its chairman, had asked for two cents on green hides and six on dried hides.

Only two members of the Finance Committee majority — Curtis and Smoot—supported the duties, while four members—Calder, Dillingham, Frelinghuysen and Sutherland—voted against them. Chairman McCumber and Senator Watson, of Indiana, the other two members present, were paired. Five members of the tariff bloc broke away on the ballots.

With hides sent back to the free list, Senator Smoot, of Utah, for the committee, moved that the Senate disagreed to the amendment proposing a rate of 12 cents a pair and 5 per cent. ad valorem on boots and shoes and varying rates on hand rough and sole leather, belting and harness leather and various other kinds of this product. This motion prevailed without a roll-call.

In the six hours' debate on the hide duty, Senator Lodge, of Massachusetts, the Republican leader, and Senator Walsh of the same State, a Democratic member of the Finance Committee, were found fighting side by side against the duties. Senators Lenroot, Republican, of Wisconsin, and Pomerene, Democrat, Ohio, also made extended arguments against removing hides from the free list, while Senators Bursum, Republican, of New Mexico; Jones, Democrat, of New Mexico; McCumber, Republican, of North Dakota, in charge of the bill; Sanfield, Republican, of Oregon, and Gooding supported the committee's recommendation.

There was a sharp disagreement between proponents and opponents as to how much the proposed hide duties would increase the price of shoes and as to whether the cattle raisers or the Chicago meat packers would get the benefit from the tariff. Opponents placed the increase on shoes at from 20 cents a pair to 27 cents, while advocates said the increased cost would range from 3½ to 6 cents a pair.

Senator Lodge and Walsh declared the boot and shoemakers were opposed to duties on their products if they could have free hides, because they were competing in the world markets and needed no protection. They also contended that the tariffs on hides would injure if not destroy the 700 independent tanning concerns in the country who depended upon imported hides.

Senator Lenroot argued that 90 per cent. of the farmers of the country would lose by reason of a tariff on hides, as they had only one or two hides to sell a year, while they were compelled to buy many pairs of shoes for their families.

BOYS' WEEK A FIXTURE.

Rotarians So Decide Because Of Work Done.

Chicago.—International Rotary Club officers, in session here, made plans for the permanent establishment of Boys' Week. A week's outing for boys has been planned by 194 clubs in the United States. It was announced that reports showed that the educational campaign for one year has resulted in nearly 30,000 boys and girls resuming their studies after having dropped out of school. Additional appropriations for this work will be made this year by all clubs, the announcement stated.

ABSOLVES RESTAURATEUR.

District Attorney Says He Isn't Blamable For Arsenic Deaths.

New York.—District Attorney Banton advised the Health Department that investigation by his office showed that Samuel Dexter, proprietor of the Shelburne Restaurant, was in no way responsible for the placing of arsenic in food that killed six patrons about a week ago. It is expected that the department will issue a permit for him to resume business.

TONG WAR BREAKS OUT AGAIN.

Chinaman Dying And Woman Wounded As Result Of Gun Fire.

New York.—Tong hatred that has smoldered in Chinatown for 10 years, during a forced peace by squads of police, broke out Tuesday night with a roar of gun fire, and the president of one of the rival brotherhoods lies dying, and a woman companion is in a hospital with gunshot wounds, while all Chinatown talks of war.

WILL FLY TO CALI

Army Dirigible At Aberd For Long Flight

Washington.—The Army C-2, now at the Aberdee Grounds, Maryland, will ma continental flight from La Virginia, to Ross Field, A early in September.

The airship has been or its Maryland anchorage Field, to be placed in co the scheduled flight, an nouncement by the War said the ship would be com Major H. A. Strauss during California.

The tentative itinerary cludes:

Washington; McCook F Scott Field, Illinois; C Arkansas; Love and Bro Marfa and Camp Bierne, Yuma, Arizona.

SEE FLAW IN POINCARE

French Premier To Proposed Modific

EXAMINE NEW SUGG

British And Italians Fear Steps May Defeat Th pose—New Measu Proposed.

London.—The proposa Premier Poincare of Fra trol of Germany's finance for a moratorium for Ger not to have found favor w ish and Italian financial ex ly because they forsee t would involve the Allies i ing political entanglem would not be justified by be gained financially.

This developed during th of the Poincare plan by experts, when there were mated tilts.

Among the new point were the possibility of customs barriers on the e dary of German occupie whether it would be pract everything entering or Ruhr region; the questio of State-owned mines, domains on the left bank and also whether the 26 customs duties provided agreement of May, 1921, goes to the Allied treasuri stead, be paid to the Repa mission, thus forming reparations fund.

In the discussions t strongly supported the F point, in opposition to while the Italians leaned British position, which a that it may easily be po sort to measures of suc as to defeat the object in running the risk of ultim ganizing Germany's econo

CLASS 1 RAILWAY E

Showing Made By Repo And June.

Washington. — One h ninety-nine of the 200 "cla roads of the United State gregate net income in Jun 500, or at the annual rat reports filed by them w Commerce Commission. T ings in June, 1921, was a 3.18 per cent., and in Ma per cent.

The reports for June s ating revenue totaling $47 increase of 2½ per cen same months last year, w ing expenses were given 000, a decrease of 4½ per

Fifty roads—29 in the the South, and 20 in the W ed operating deficits in J 56 in May.

JURY TO RULE ON

Magistrate Declines To cency Of Woman's

Harrisburg.—A jury wil side whether Mrs. Lavina Middletown, wears her short. William Bedger, h neighbor, says she does out a warrant charging l mon indecency because just tipped her knees and much hosiery. The case before Squire C. Dudley C rad decided it was a case and held the woman for c

DAVIS MADE MAJOR G

Will Be Youngest Of Th The Service.

Washington.—Col. Robe Davis, now acting adjutan the Army, was nominate dent Harding to be adjut with the rank of major g new adjutant general youngest major general i being only 46 years of ag

GIRLS RESCUE MO

Monroe, Mich.—Forty gi ledo, Ohio, members of Gamma Nu, a high scho permitted their sorority ho Erie at Lakeside, near he while they rescued Mrs. genbaum and her three ch their burning home next fire started in the Sanger and spread to the sorority girls broke in the front home and carried the wom dren to safety.

END